

There is a national focus on drinking water quality and chemicals known as PFAS

June 27, 2022

As a public Water Utility, the city of Thornton's highest priority is protecting public health; and ensuring our drinking water is always safe, high-quality, and meets all regulatory standards set by the state and federal governments. On June 15, 2022, the EPA issued new Health Advisory Levels to manage the risk for a group of man-made chemicals in drinking water called PFAS (Per- and polyfluoroalkyl substances). These new Health Advisory Levels (HAL) for PFAS impact thousands of Water Utilities and private wells across the United States. **Thornton has been proactive in PFAS monitoring and as such is in a limited group of Colorado utilities that has both tested and confirmed PFAS levels above the HAL.** Thornton is partnering with the Colorado Department of Health and Environment (CDPHE) to continue to assess those levels in our source and finished water, conduct customer outreach to inform and provide transparency, and work towards reducing PFAS levels in our water supply over the long term.



What are PFAS compounds?

PFAS compounds have been widely used in the manufacturing of carpets, clothing, furniture fabrics, paper packaging for food, cosmetics, and other materials since the 1940's. These compounds have strong water, grease, and stain-resistant capabilities. They are also found in firefighting foams and industrial processes. The EPA says most people are exposed to these chemicals through various consumer product use. Drinking water can be an additional source of exposure in communities where these chemicals have entered the water supplies and reducing levels in drinking water is a top priority for CDPHE and Thornton.

PFAS are a large family of compounds, up to 5,000 chemicals. The EPA is focused on a small number of PFAS compounds, two of which are perfluorooctanoic acid (PFOA) and

perfluorooctane sulfonic acid (PFOS), that at very low concentrations over a lifetime, may have health effects.

According to the EPA, most U.S. manufacturers voluntarily phased out uses of PFOA and PFOS in the mid-2000s. However, these chemicals remain in the environment due to their inability to degrade. Many water utilities, including the city of Thornton, are investigating the presence of PFAS in their water and are researching treatment options to reduce PFAS levels. The EPA regulates the safe levels for hundreds of compounds in drinking water. Currently, there is no federal regulation for PFAS.

What is the EPA's Health Advisory Level, and what does it mean?

It can be a lengthy process to set drinking water regulations. With risk, there is no such thing as zero, so research is essential to determine risk levels that are protective of public health. A Health Advisory Level is commonly the first step the EPA takes in developing a regulation.

On June 15, 2022 the EPA set new *Interim* Health Advisory Levels at **0.004 parts per trillion** for PFOA, and **0.02 parts per trillion** for PFOS. These are very low microscopic levels or trace amounts. For perspective, 1 part per trillion equals 1 drop in 500,000 barrels of water. **These *Interim* Health Advisory Levels are also below the current, reliable detection abilities of scientific equipment** (Scientists can currently detect PFAS compounds at approximately 2 parts per trillion).

The EPA first issued a Health Advisory Level for PFOA and PFOS in 2016, at 70 parts per trillion. Because of further research and as the EPA determines its regulatory approach, it has reduced its Health Advisory Level.

Health Advisories are not enforceable like regulations. Instead, the advisories are *interim* guidance to foster local response prior to the EPA developing a formal regulation. A Health Advisory Level is the minimum compound concentration that may present health risks to an individual over a lifetime of exposure. Because there is uncertainty about the health effects associated with long-term exposure to compounds, the EPA sets lower Health Advisory Levels. Sometimes, as in the case of PFAS, the advisory is lower than current analytical methods can detect.

These Health Advisories are set with the objective of protecting all people, including sensitive populations and life stages (such as infants), from negative health impacts because of lifetime exposure to PFAS in drinking water.

The current health advisories for PFOA and PFOS are based on human studies in populations exposed to these chemicals. There is strong evidence that certain exposures to PFOA and PFOS:

- Impact the immune system.
- Increase cholesterol.
- Decrease infant birth weight.
- Cause changes in liver function.

There is moderate evidence that PFAS are associated with:

- Preeclampsia and high blood pressure during pregnancy.
- Effects on thyroid hormones.

There is also evidence that PFOA increases the risk of kidney and testicular cancer.

Children ages 0-5 years, and people who are pregnant, planning to become pregnant, or breastfeeding are more susceptible to health impacts from these chemicals. Visit <https://cdphe.colorado.gov/pfas-health> for more information.

What actions should I consider? What does this mean?

- This is a concern, not a crisis. People do not need to stop drinking their water.
- The lower your exposure, the lower your risk. People who are concerned can:
 - Reduce exposure from drinking water by using water treated by an [in-home water treatment filter](#) that is certified to lower the levels of PFAS or by using bottled water that has been treated with reverse osmosis for drinking, cooking, and preparing baby formula. Use tap water for bathing, showering, brushing teeth, washing hands, watering yards, washing dishes, cleaning, and laundry.
 - Reduce exposure from other sources. Visit <https://cdphe.colorado.gov/pfas-health> to learn more.
- Boiling, freezing, or letting water stand does not reduce PFAS levels.
- If you have specific health concerns, consult your doctor. An information sheet, “Talking to Your Health Care Provider about PFAS,” is available at <https://bit.ly/PFAS-doctor>.

Bottled water

EPA and CDPHE do not recommend bottled water. Using bottled water is an individual choice, but there are important concerns with bottled water. CDPHE cannot verify that all bottled water is below PFAS interim health advisories. Reverse osmosis is a treatment that removes PFAS. We recommend people who use bottled water choose a brand that has been treated with reverse osmosis and includes this language on the bottle.

What are the levels in Thornton’s drinking water?

The EPA first issued a Health Advisory Level for PFOA and PFOS in 2016, at 70 parts per trillion. Thornton’s Water Quality Division has collected samples of our source waters and the treated drinking water leaving the treatment plants. Our most current monitoring results for PFOA and PFOS show the following results:

Wes Brown Water Treatment Plant

PFAS Compound	May 2022	EPA Health Advisory Level
PFOA	5.4 parts per trillion	0.004 parts per trillion*
PFOS	2.0 parts per trillion	0.02 parts per trillion*

Thornton Water Treatment Plant

PFAS Compound	May 2022	EPA Health Advisory Level
PFOA	7.1 parts per trillion	0.004 parts per trillion*
PFOS	3.5 parts per trillion	0.02 parts per trillion*

** HAL is below current scientific detection levels. Minimum Reporting Level (MRL) is 2 ppt. EPA establishes MRLs to ensure consistency in the quality of the information reported to the agency. The MRL is the minimum quantitation level that, with 95 percent confidence, can be achieved by capable analysts at 75 percent or more of the laboratories using a specified analytical method (recognizing that individual laboratories may be able to measure at lower levels).*

The other PFAS compounds for which the EPA issued health advisory levels include hexafluoropropylene oxide dimer acid (HFPO-DA), otherwise known as “GenX,” and Perfluorobutane sulfonic acid (PFBS). Our monitoring results indicate levels that are *well below* the Health Advisory Levels for these compounds:

PFAS Compound	May 2022	EPA Health Advisory Level*
GenX	Non-detectable at both Wes Brown and Thornton Water Treatment Plants.	10 parts per trillion
PFBS	5.8 parts per trillion at Wes Brown Water Plant. 8.0 parts per trillion at Thornton Water Treatment Plant	2,000 parts per trillion

*The MRL for Gen-X and PFBS is 1.9 ppt.

What is Thornton Water doing about PFAS?

We recognize the average level of PFOA and PFOS in our monitoring is above the EPA's new Health Advisory Levels. That is why research is a priority. Our scientists are actively coordinating with the Colorado Department of Public Health and Environment to:

- Determine the levels of PFAS in our water through additional monitoring and evaluation
- Investigate established and emerging treatment options
- Develop feasible strategies to reduce levels of PFAS as the EPA develops and finalizes its future drinking water standards
- Protect against additional pollution to our source waters

The lower the level, the lower the risk. As always, public health and providing high quality drinking water is our top priority. As we learn more, we will continue to update you with our findings and strategy. **The city of Thornton's water has and continues to meet all Federal and State Primary Drinking Water Standards.**

Ask a question or reach out with a concern. We are always available to discuss how we produce and deliver your drinking water and the steps we take to maintain quality. Our Water Quality team can be reached at **303-255-7770** or WaterQuality@ThorntonCO.gov

Our business address is

**City of Thornton
Attn: Water Quality
9500 Civic Center Dr.
Thornton, CO 80229**

More information:

City of Thornton water specifics:

<https://www.thorntonco.gov/government/infrastructure/water/Pages/water-quality.aspx>

State of Colorado PFAS information

<https://cdphe.colorado.gov/pfas>

EPA PFAS information, including PFAS Strategic Roadmap with expected regulatory dates

<https://www.epa.gov/pfas>

PFAS in the news:

<https://www.npr.org/2022/06/22/1106863211/the-dangers-of-forever-chemicals>

Please share this information with other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses).

The City of Thornton wishes to thank the EPA, Colorado Department of Public Health and Environment, American Water Works Association, and Louisville Water, Louisville, KY, for assistance with this messaging.